AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

Claim 1. Cancelled.

Claim 2. (Currently amended): A non-aqueous electrolyte secondary cell comprising:

a positive electrode having a positive electrode active material intercalating and deintercalating lithium ions;

a negative electrode having a negative electrode active material intercalating and deintercalating lithium ions;

a non-aqueous electrolyte having a non-aqueous solvent and an electrolyte salt;

an outer casing can having mounted therein the positive electrode, the negative electrode, and the non-aqueous electrolyte, and having an opening portion; and

a sealing structure for sealing the opening portion and having a sealing plate;

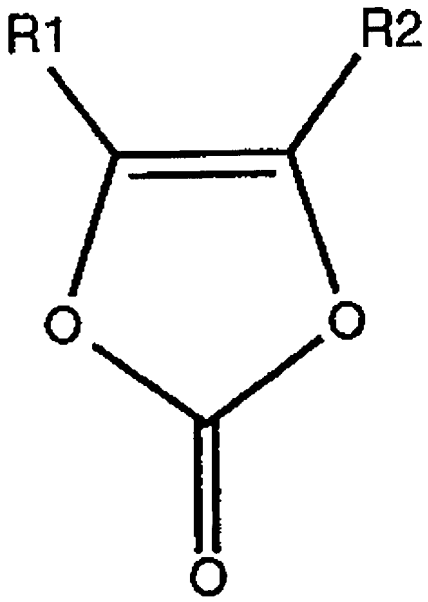
wherein:

the [[a]] positive electrode active material consists of ~~contained in the positive electrode is~~ a lithium cobalt ~~compound~~ oxide;

the positive electrode active material has a bulk density in the positive electrode of 3.3 g/cm^3 or more; and

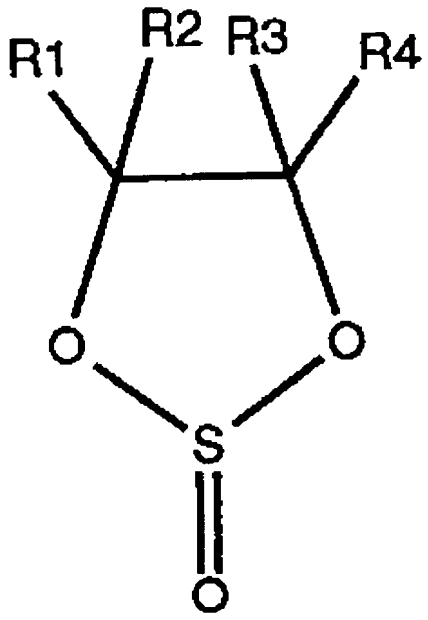
the non-aqueous electrolyte includes a vinylene carbonate compound represented by Chemical Formula 1, a cyclic sulfite compound represented by Chemical Formula 2 or 3, and a

phenylcycloalkane compound, ~~or an alkylbenzene compound having a quaternary carbon directly bonded to a benzene ring,~~



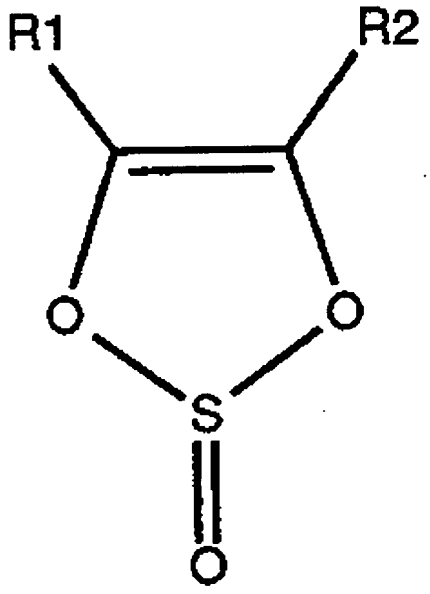
Chemical Formula 1

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less,



Chemical Formula 2

where R1 to R4 are independently a hydrogen atom or an alkyl group with two carbons or less,



Chemical Formula 3

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

Claim 3. (Currently amended): The non-aqueous electrolyte secondary cell according to claim 2, wherein:

when a total mass of the non-aqueous solvent and the electrolyte salt is taken as 100, an amount of the vinylene carbonate ~~derivative~~ compound is 0.5 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt; and

an amount of the cyclic sulfite ~~derivative~~ compound is 0.1 to 2 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 4. Cancelled.

Claim 5. (Currently amended): A non-aqueous electrolyte secondary cell comprising:

a positive electrode having a positive electrode active material intercalating and deintercalating lithium ions;

a negative electrode having a negative electrode active material intercalating and deintercalating lithium ions;

a non-aqueous electrolyte having a non-aqueous solvent and an electrolyte salt;

an outer casing can having mounted therein the positive electrode, the negative electrode, and the non-aqueous electrolyte, and having an opening portion; and

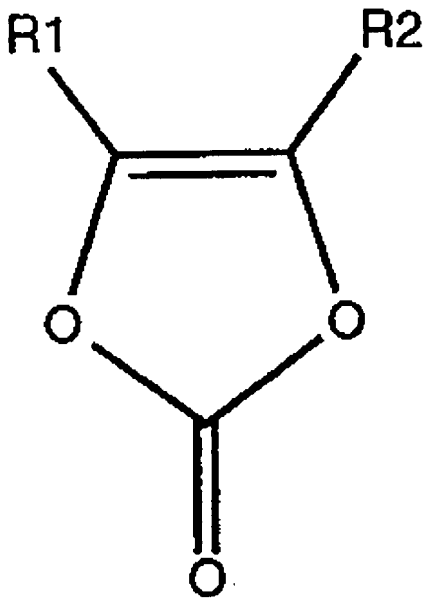
a sealing structure for sealing the opening portion and having a sealing plate;

wherein

the [[a]] positive electrode active material consists of ~~contained in the positive electrode is~~ a lithium cobalt ~~compound~~ oxide;

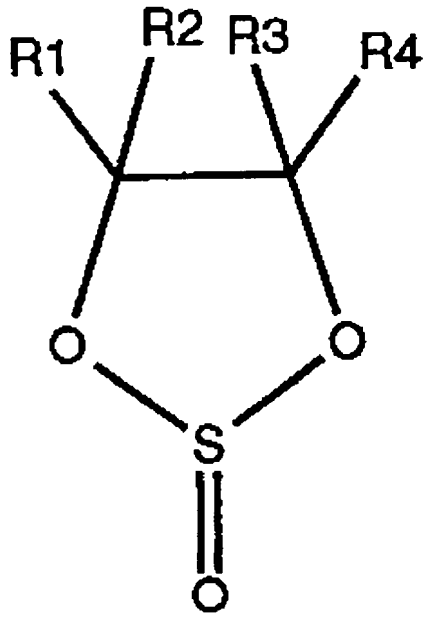
the positive electrode active material has a bulk density in the positive electrode of 3.3 g/cm^3 or more; and

the non-aqueous electrolyte includes a vinylene carbonate compound represented by Chemical Formula 1, a cyclic sulfite compound represented by Chemical Formula 2 or 3, a phenylcycloalkane compound, and an alkylbenzene compound having a quaternary carbon directly bonded to a benzene ring,



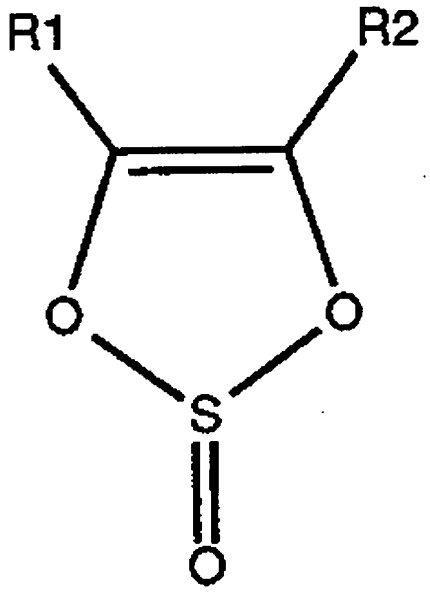
Chemical Formula 1

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less,



Chemical Formula 2

where R1 to R4 are independently a hydrogen atom or an alkyl group with two carbons or less,



Chemical Formula 3

where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

Claim 6 (Previously Presented): The non-aqueous electrolyte secondary cell according to claim 5, wherein:

when a total mass of the non-aqueous solvent and the electrolyte salt is taken as 100, an amount of the vinylene carbonate compound is 0.5 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt; and

an amount of the cyclic sulfite compound is 0.1 to 2 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 7. (Currently amended): The non-aqueous electrolyte secondary cell according to claim [[2]] 3, wherein:

the vinylene carbonate compound is at least one selected from the group consisting of vinylene carbonate, methyl vinylene carbonate, and ethyl vinylene carbonate;

the cyclic sulfite compound is at least one selected from the group consisting of ethylene sulfite, vinylene sulfite, and methyl ethylene sulfite; and

the phenylcycloalkane compound is at least one selected from the group consisting of phenylcyclohexane, phenylcycloheptane, and phenylcyclopentane~~; and~~

~~the alkylbenzene compound is at least one selected from the group consisting of tert-butylbenzene, tert-amylbenzene, and tert-hexylbenzene~~.

Claim 8. (Currently amended): The non-aqueous electrolyte secondary cell according to claim [[5]] 6, wherein:

the vinylene carbonate compound is at least one selected from the group consisting of vinylene carbonate, methyl vinylene carbonate, and ethyl vinylene carbonate;

the cyclic sulfite compound is at least one selected from the group consisting of ethylene sulfite, vinylene sulfite, and methyl ethylene sulfite;

the phenylcycloalkane compound is at least one selected from the group consisting of phenylcyclohexane, phenylcycloheptane, and phenylcyclopentane; and

the alkylbenzene compound is at least one selected from the group consisting of tert-butylbenzene, tert-amylbenzene, and tert-hexylbenzene.

Claim 9. (Currently amended): The non-aqueous electrolyte secondary cell according to claim [[2]] 7, wherein:

~~the non-aqueous electrolyte contains a phenylcycloalkane compound,~~ the amount of the phenylcycloalkane compound being 0.2 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 10. (Currently amended): The non-aqueous electrolyte secondary cell according to claim [[5]] 8, wherein a total amount of the phenylcycloalkane compound and the alkylbenzene compound is 0.2 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

Claim 11 (New). A non-aqueous electrolyte secondary cell comprising:

a positive electrode having a positive electrode active material intercalating and deintercalating lithium ions;

a negative electrode having a negative electrode active material intercalating and deintercalating lithium ions;

a non-aqueous electrolyte having a non-aqueous solvent and

an electrolyte salt;

an outer casing can having mounted therein the positive electrode, the negative electrode, and the non-aqueous electrolyte, and having an opening portion; and

a sealing structure for sealing the opening portion and having a sealing plate;

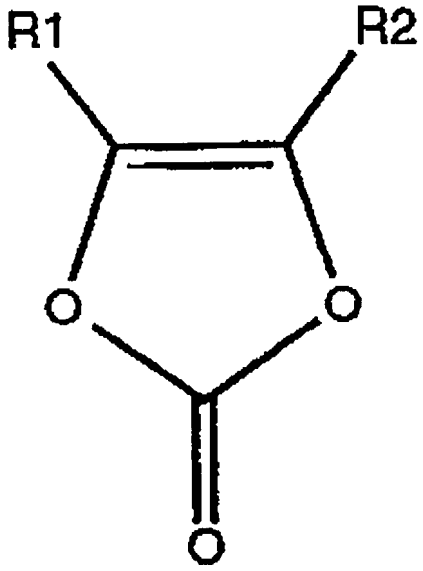
wherein:

the positive electrode active material consists of a lithium cobalt oxide,

the positive electrode active material has a bulk density in the positive electrode of 3.3 g/cm^3 or more; and

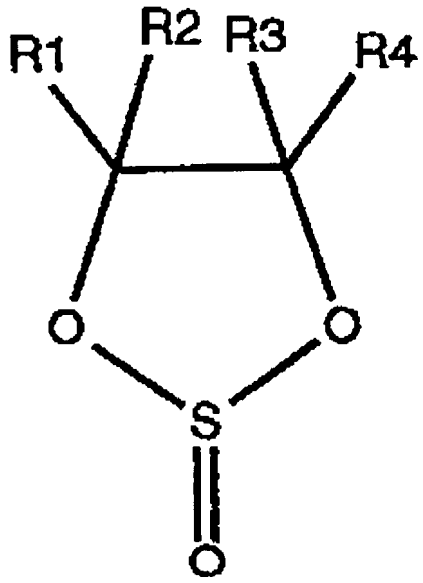
the non-aqueous electrolyte includes a vinylene carbonate compound represented by Chemical Formula 1, a cyclic sulfite compound represented by Chemical Formula 2 or 3, and an alkylbenzene compound having a quaternary carbon directly bonded to a benzene ring:

Chemical Formula 1



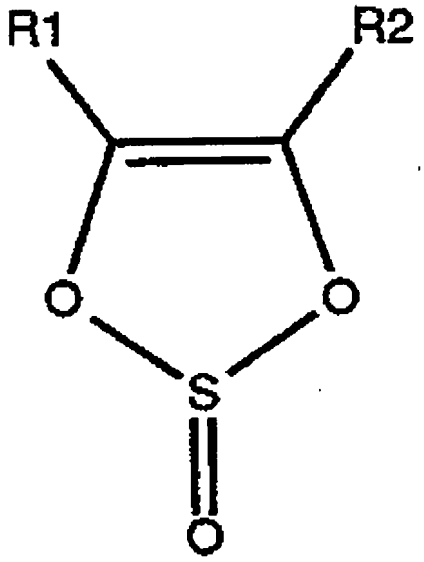
where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less,

Chemical Formula 2



where R1 to R4 are independently a hydrogen atom or an alkyl group with two carbons or less,

Chemical Formula 3



where R1 and R2 are independently a hydrogen atom or an alkyl group with two carbons or less.

12. (New): The non-aqueous electrolyte secondary cell according to claim 11, wherein:

when a total mass of the non-aqueous solvent and the electrolyte salt is taken as 100, an amount of the vinylene carbonate compound is 0.5 to 3 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt; and

an amount of the cyclic sulfite compound is 0.1 to 2 parts by mass per 100 total mass of the non-aqueous solvent and the electrolyte salt.

13. (New): The non-aqueous electrolyte secondary cell according to claim 12, wherein:

the vinylene carbonate compound is at least one selected from the group consisting of

vinylene carbonate, methyl vinylene carbonate, and ethyl vinylene carbonate;

the cyclic sulfite compound is at least one selected from the group consisting of ethylene sulfite, vinylene sulfite, and methyl ethylene sulfite:

the phenylcycloalkane compound is at least one selected from the group consisting of phenylcyclohexane, phenylcycloheptane, and phenylcyclopentane; and

the alkylbenzene compound is at least one selected from the group consisting of tert-butylbenzene, tert-amylbenzene, and tert-hexylbenzene.